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DIPOLE WIDTH OF THE NMR LINE OF **1**6**9Tm IN THULIUM ETHYL SULFATE.

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Abstract

The authors analyze the width of the NMR line of **1**6**9Tm (spin I equals 1/2) in a model crystals of Tm(C//2H//5SO//4)//3:9H//2O at 4. 2 K. In the case of rare-earth ethyl sulfates LnES the only interaction between magnetic particles is of the dipole-dipole type so that it is easy to calculate the second moments of the NMR lines. The positions of atoms in the ethyl sulfate lattice have already been determined so that the only unknowns are the lattice parameters of TmES at 4. 2 K. The latter can be obtained simply by determining the coordinates of the hydrogen atoms and the positions of the lines in the NMR spectrum of H in a field H perpendicular to the c axis of the crystal. The results of the analysis are presented and discussed.